

5th December, 1962.

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Dear Severo,

Thank you so much for the letter and the preprint. I must really congratulate you on the poly A-polylysine result. We are all kicking ourselves for having missed it. Naturally I am delighted that you are finding more triplets. You will remember that when I visited you last February I felt sure that there would be many more than the ones you had then. I am still not very happy about the identification of triplets, and feel that it is important to make polynucleotides with a range of compositions and not just 5:1 or 1:5.

As to the question of degeneracy I feel that if all the codons are triplets, and if, say AUC, ACC, AGC and AAC all stand for histidine (we would write this as A.C) nevertheless one would call this degeneracy. You will see that I discuss such possibilities in my review, including your point about transfer RNA (see pages 62 and 63). On the other hand if Robert's code were correct, i.e. a mixture of doublets and triplets, one for each amino acid, so that the reading sometimes moved on two steps and sometimes three, then I would agree that it should be called non-degenerate. However, I feel our genetic results make such a code unlikely. I wish I could penetrate the logic (if any) of the degeneracy but so far it has baffled me.

Off to Stockholm in a day or so. It will be quite a family affair this time.

With all good wishes,

F. H. C. Crick